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II 修士論文要旨

Intermuscular and bone muscle relations in the hip and thigh regions of primates

by Solomon Yirga

The hip and thigh regions of twenty-two specimens of ten different species of primates were dissected; *Galago crassicaudatus*, *G. senegalensis*, *Nyctcebus coucang*, *Macaca fuscata*, *M. mulatta*, *Colobus guereza*, *Hylobates concolor*, *H. hoolock*, *H. lar*, and *Pan troglodytes*. The insertion length of each muscle and its dry weight were measured. The relative weights were calculated. The percentages of the insertion lengths were calculated by using Stern's (1971) procedure.

The first part of this work deals exclusively with the muscles of these regions. As for *Musculus gluteus maximus* and *M. biceps femoris*, whenever the relative weight is large the insertion length is extensive and when the relative weight is small the insertion length is also small. *Pan* and *Hylobates* on the one hand, and *Macaca* and *Colobus* on the other have reversed relations of *M. gluteus maximus* and *M. biceps femoris*. *M. gluteus maximus* is relatively large and *M. biceps femoris* is relatively small in the former, whereas the situation is reversed in the latter which have a relatively larger *M. biceps femoris* than *M. gluteus maximus*. Thus, the hip is extended predominantly by *M. gluteus* in *Pan* and *Hylobates*, whereas it is extended mostly by *M. biceps femoris* in *Macaca* and *Colobus*. However, the prosimians dissected in this work do not fit into any of the above categories. The relative weight as well as the lengths of attachment of these muscles are not much different from one another in *Galago* and *Nycti-*

cebus. Thus, the hip is extended in the latter two genera equally by both of the muscle groups.

The second part of this study deals with the relation of bones and muscles of the hip and thigh regions. Some measurements were made on the innominate and femur bones and from these dimensions indices were calculated. The relative weights of the muscles were correlated with the indices of the corresponding bones.

The relative lengths of the ischium, the pubic, and the biomechanical femur neck, the relative height of the condyles of the femur, and the relative position of the lesser trochanter of the femur are correlated with the hamstrings, adductors, gluteals, quadriceps femoris, and iliopsoas muscles respectively. To summarize, the species which have high relative weights of a given group of muscles have high values of the corresponding indices of the bones, whereas the species with relatively small relative weights of a given group of muscles have small values of the corresponding indices of the bones.

ニホンザル野生群における父親決定に関する研究

早坂 謙二

ニホンザル群でみられるような、霊長類の複雄群で、子供の父親を決定することは、霊長類集団の社会構造、および、その進化について研究する上で、重要な意味を持っている。

ヒトでは、父親を決定する方法として、父権否定法が、一般に用いられている。父権否定法とは、子供が持っていて、母親が持っていない遺伝子を持っていない男は、その子供の父親であることを否定される、という考え方である。霊長類複雄群でも、同じ方法を使って、父親を決定することが、原理的には、可能である。